

**American Basin Fish Screen and
Habitat Improvement Project
Sutter and Sacramento Counties, California**

**Draft
Environmental Impact Statement /
Environmental Impact Report**

Volume I

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Federal Lead Agency

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Bureau of Reclamation, Mid-Pacific Region
Division of Resource Management
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Draft Environmental Impact Statement/Environmental Impact Report

**American Basin Fish Screen and
Habitat Replacement Project**

State Clearinghouse No. 2003092006

Sacramento and Sutter Counties, California

Prepared by Bureau of Reclamation and California Department of Fish and Game

This Environmental Impact Statement/Environmental Impact Report (EIS/EIR) was prepared in compliance with the National Environmental Policy Act (NEPA) and Bureau of Reclamation (Reclamation) NEPA procedures, in addition to the California Environmental Quality Act (CEQA) and CEQA Guidelines.

Reclamation and the California Department of Fish and Game propose to authorize and provide funds to the Natomas Central Mutual Water Company (Natomas Mutual) to construct and operate the *American Basin Fish Screen and Habitat Improvement Project* (ABFS Proposed Action). The purpose of the ABFS Proposed Action is: (1) to avoid or minimize potentially adverse effects to fish, particularly anadromous juvenile fish, due to water diversions by Natomas Mutual and other small pumps operated by individual landowners for diversion of water into the Natomas Basin; (2) to ensure reliability of Natomas Mutual's water diversion and distribution facilities for beneficial uses of its water supply within its service area; and (3) to maintain important habitat within the Natomas Basin created by the operation of the Natomas Mutual's water distribution facilities.

This EIS/EIR analyzes the impacts of the ABFS Proposed Action, which would result in modification of Natomas Mutual's water diversion and distribution system adjacent to the Sacramento River and Natomas Cross Canal (NCC) in Sacramento and Sutter counties, California. In addition to the ABFS Proposed Action, the EIS/EIR also analyzes the impacts of three alternatives, including the No Action Alternative.

The EIS/EIR addresses impacts related to constructing and operating one or two positive-barrier fish screen diversion facilities; decommissioning and removing the Verona Diversion Dam and lift pumps; removing five pumping plants and one small private diversion; and modifying the distribution system. The EIS/EIR describes and analyzes the direct and indirect effects of project construction and operation on biological resources (terrestrial and aquatic), hydrology and water quality, cultural resources, aesthetics, agricultural resources, air quality, geology and soils, hazards and hazardous materials, land use and planning, noise, transportation and circulation, energy and depletable resources, Indian Trust Assets, and environmental justice.

Comments must be received by April 28, 2008.

For further information regarding this EIS/EIR, contact Mr. James Navicky, California Department of Fish and Game, North Central Region, 1701 Nimbus Road, Rancho Cordova, California 95670, telephone 916-358-2900; or Mr. Bradley Hubbard, Bureau of Reclamation, Division of Resources Management, 2800 Cottage Way, Sacramento, California 95825, telephone 916-978-5204.

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EXECUTIVE SUMMARY

PROJECT SUMMARY

The *American Basin Fish Screen and Habitat Improvement Project* (ABFS Proposed Action) involves the improvement of the Natomas Central Mutual Water Company's (Natomas Mutual) water diversion and distribution system. Proposed improvements include:

- the consolidation of the five existing water pumping plants on the Sacramento River and Natomas Cross Canal (NCC) into either one or two diversion facilities (two under the ABFS Proposed Action and one under Alternatives 1 and 2);
- the removal of one privately owned pump adjacent to the Sankey Diversion;
- the addition of state-of-the-art fish screens to the new diversion(s);
- the elimination of the existing Verona Dam and diesel lift pumps at the mouth of the NCC; and
- the modification of the existing system of distribution canals to maintain the current level of irrigation service.

The ABFS Proposed Action is located in northwestern Sacramento County and southern Sutter County. The project area includes a portion of the lower Sacramento River where Natomas Mutual's existing pumping plants are located (generally between River Mile [RM] 79 and RM 61) and the NCC (see **Figure S-1**).

BACKGROUND

The project is receiving funding assistance from the Central Valley Project Improvement Act's (CVPIA) Restoration Fund (through the Anadromous Fish Screen Program under Section 3406(b)(21) of the CVPIA). Funds are also being secured from the State of California's Proposition 204 (1996) and the CALFED Bay-Delta Authority's Ecosystem Restoration Program Plan (ERP).

The Bureau of Reclamation (Reclamation), which is administering Federal funds for the ABFS Project Action, is the lead Federal agency under the National Environmental Policy Act (NEPA). The California Department of Fish and Game (CDFG), which has permitting authority for facilities affected by the ABFS Proposed Action, is the state lead agency under the California Environmental Quality Act (CEQA).

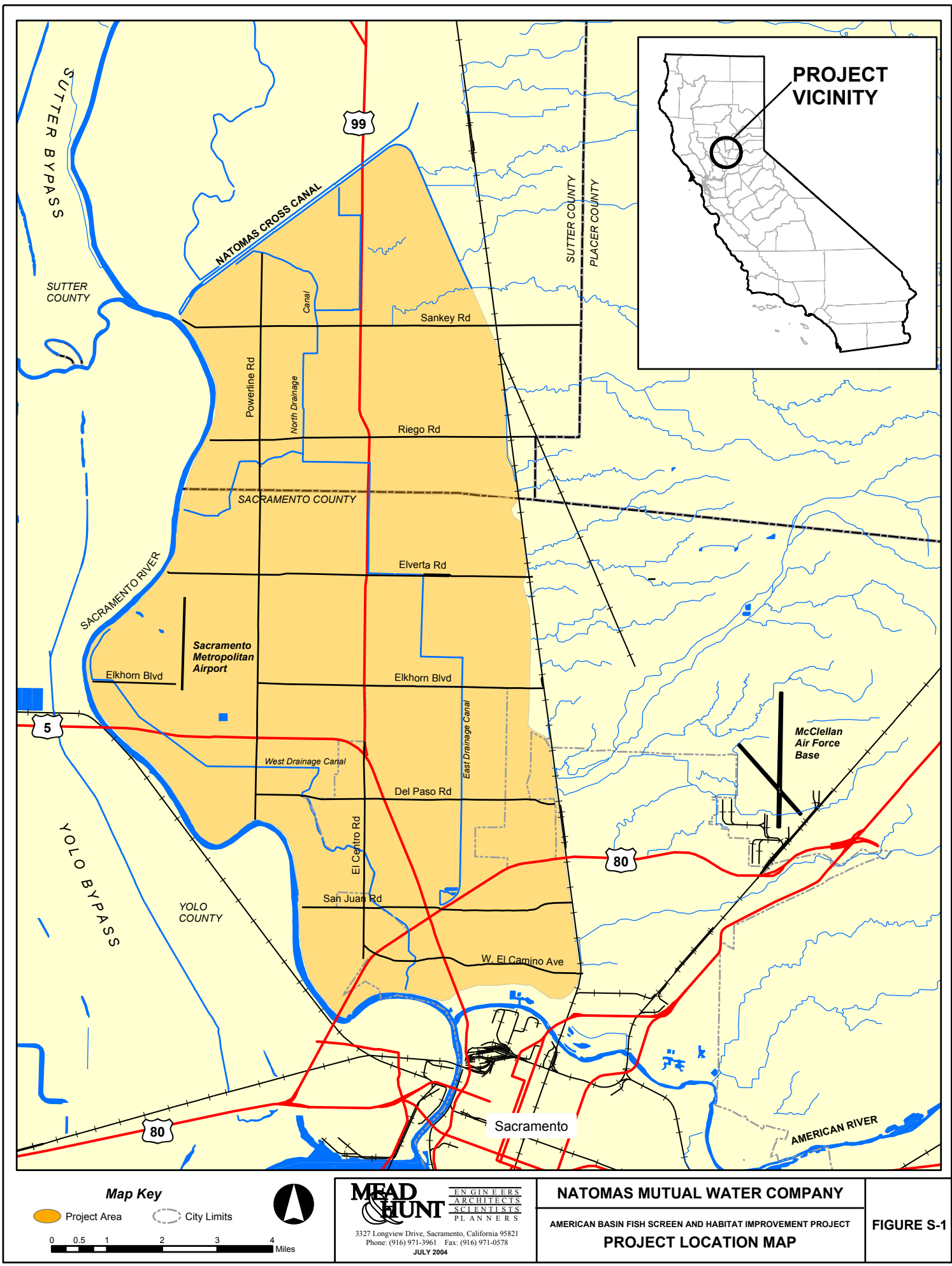


FIGURE S-1

Project Purpose and Need

The purpose and need and primary objectives of the ABFS Proposed Action are:

- To avoid or minimize potentially adverse effects to fish, particularly anadromous juvenile fish, due to water diversions by Natomas Mutual and if possible, one small diversion by an individual landowner in the Natomas Basin.
- To ensure reliability of Natomas Mutual's water diversion and distribution facilities for beneficial uses of its water supply within the Natomas Mutual service area.
- To maintain important habitat within the Natomas Basin created by the operation of Natomas Mutual's water distribution facilities.

PUBLIC AND AGENCY INVOLVEMENT

As required by CEQA, the Notice of Preparation (NOP) of an EIS/EIR for the ABFS Proposed Action was filed with the Office of Planning and Research (OPR) on September 2, 2003 (State Clearing House Number 2003092006); the NEPA Notice of Intent (NOI) of an EIS/EIR was published in the Federal Register on October 22, 2003. Both the NOP and NOI were circulated to the public, local and state agencies, and other interested parties to solicit comments on the proposed ABFS Proposed Action. Environmental issues and alternatives raised by comments received on the NOP and NOI during the subsequent 45-day public review period were considered for inclusion in the EIS/EIR (see **Appendices B and C** for the NOP and NOI). Written correspondence received from the public and interested organizations during the scoping process are listed in Chapter 5, *Consultation and Coordination*. Copies of all written correspondence received are provided in **Appendix G**.

Three public scoping meetings were held for the ABFS Proposed Action, including two scoping meetings on September 15, 2003 at 1:30 p.m. and 7:00 p.m. and one scoping meeting on November 20, 2003 at 6:30 p.m. Comments received at the scoping meetings are summarized in Chapter 5, *Consultation and Coordination*.

SUMMARY OF PROJECT ALTERNATIVES

CEQA and NEPA require that environmental documents identify and analyze a reasonable range of feasible alternatives that could meet the project objectives to varying degrees. Under CEQA and NEPA, the range of potential alternatives to the ABFS Proposed Action shall include those that could feasibly accomplish most of the basic purpose and need, and objectives of the project. In addition, CEQA requires an alternative that could avoid or substantially lessen one or more of the significant effects. Thus, the range of alternatives evaluated in the following analysis is

dictated by the range of significant impacts identified in this EIS/EIR, and evaluated alternatives are limited to those that would reduce or eliminate identified environmental impacts. Accordingly, four alternatives, listed below, were formulated to illustrate the range of projects that could be implemented as an alternative to the ABFS Proposed Action.

- No Action/No Project Alternative
- ABFS Proposed Action – Sankey and Elkhorn Diversions
- Alternative 1 – Sankey Diversion
- Alternative 2 – Prichard Diversion

No Action/No Project Alternative

The No Action/No Project Alternative describes a projection of existing conditions to future conditions without the ABFS Proposed Action. It is analyzed to provide a comparative evaluation of the action alternatives, as required by NEPA and CEQA. Under the No Action/No Project Alternative, the following would occur:

- The five pumping plants (two along the NCC and three along the Sacramento River) would remain in operation and the intakes associated with these pumping plants would continue to remain unscreened;
- The existing Verona Dam and diesel pumps would continue to provide water to the two pumping plants along the NCC during periods of low flow;
- The Bolen Ranch would continue to operate a private unscreened diversion; and
- No modifications would occur to the existing distribution system.

Common Components of All Action Alternatives

All of the action alternatives of the ABFS Proposed Action entail the following improvements to Natomas Mutual facilities:

- Removing the existing Verona Dam and diesel pumps from the NCC;
- Removing the five pumping plants (two along the NCC and three along the Sacramento River);
- Removing one privately owned pump for the Bolen Ranch property adjacent to the Sankey Diversion
- Constructing one or two new diversion facilities with fish screens, to replace the water supply provided by the pumping plants being removed; and

- Modifying the distribution system to convey surface water supply from the new diversion locations to the points of service at the existing pumping plant outfalls (maintaining existing flow rates, levels and scheduling), including re-grading of existing canals, the construction of a new highline canal, and modifications to drainage canals.

ABFS Proposed Action

The ABFS Proposed Action would replace the five existing unscreened diversion facilities with two new screened diversion facilities. The ABFS Proposed Action would be implemented in three phases. Phase I would include the construction of the Sankey Diversion, the Sankey Canal and Sankey Drain, and associated improvements. Phase II includes the construction of the Elkhorn Diversion and the Elkhorn Canal. Phase III includes re-grading the Riverside Canal and making associated improvements to the internal conveyance system as required to route flows from the Sankey Diversion.

Phase I of the ABFS Proposed Action has independent utility and would be constructed first. Phase II and Phase III would only be constructed if adequate funding were to become available for these phases. Phase II has independent utility and could be constructed prior to Phase I, though it is of lower priority to the state and federal resources agencies. Phase III does not have independent utility and would only be constructed after Phase I is completed to provide water supply. Phase III could be implemented prior to Phase II. Due to the uncertainty of whether Phase I construction would be followed by Phases II and III, mitigation measures have been identified for significant impacts for each phase of the ABFS Proposed Action. Consequently, each phase of the ABFS Proposed Action will trigger specific requirements under the EIS/EIR that address impacts associated with that phase.

Phase I - Sankey Diversion

Phase I of the ABFS Proposed Action consists of constructing one new 434-cfs diversion (420 cfs for Natomas Mutual, and 14 cfs for a private diverter) on the Sacramento River, equipped with a state-of-the-art fish screen that complies with NMFS and CDFG salmonid screening criteria. The Sankey Diversion would be located near Sankey Road, approximately 0.25 mile downstream of the confluence of the Sacramento River with the NCC (just downstream of the existing marina at Verona Village). Under Phase I of the ABFS Proposed Action, the following changes would be implemented:

- Construct a new diversion facility equipped with a state-of-the-art fish screen as described above.

- Construct a new highline canal along the landside of the NCC south levee from the existing Northern Pumping Plant outfall to the new Sankey Diversion, with a connection to the existing Bennett Main Canal at the Bennett Pumping Plant outfall, including a new turnout (outlet) for replacement of the supply to the Bolen Ranch property.
- Construct the Sankey Drain adjacent to the new Sankey Canal from the North Drainage Canal at RD 1000's Pumping Plant No. 4 (Pumping Plant No. 4) to the new Sankey Diversion, including a re-lift pumping plant near the Bennett outfall for recirculation of tailwater into the Northern and Bennett systems. Flows from the existing Vestal Drain would be incorporated into the new Sankey Drain, which will be wider and longer than the existing Vestal Drain.
- Decommission and remove the existing Verona Diversion Dam and Lift Pumps.
- Decommission and remove two existing Natomas Mutual diversions at the Northern and Bennett pumping plants, and the small privately-owned pump for the Bolen Ranch property.
- Create refugia benches to improve giant garter snake habitat in those sections of the new highline canal between Pumping Plant No. 4 and the new Sankey Diversion that are on land owned by The Natomas Basin Conservancy (TNBC). By agreement with Natomas Mutual (Roberts pers. comm.), the benches would be maintained by TNBC to optimize conditions for the giant garter snake. Natomas Mutual would have an easement for maintaining water conveyance.

Limits will be designed into the system to control pumping beyond existing capacity until the Elkhorn (Phase II) and Riverside work (Phase III) is constructed and implemented. Thus, the total existing diversion capacity of 630 cfs would be maintained with the new Sankey Diversion and the existing diversions at Elkhorn, Prichard, and Riverside, which would continue to operate without fish screens during this phase.

Phase II - Elkhorn Diversion

Phase II of the ABFS Proposed Action consists of constructing one new 210-cfs diversion on the Sacramento River, equipped with a state-of-the-art fish screen, that complies with NMFS and CDFG salmonid screening criteria. The new Elkhorn Diversion would be located between Elkhorn and Elverta roads (adjacent to and just downstream of the existing Elkhorn Pumping Plant). Under Phase II of the ABFS Proposed Action, the following changes would be implemented:

- Construct a new diversion facility equipped with a state-of-the-art fish screen as described above.

- Re-grade the Elkhorn Main Canal between the existing Prichard Pumping Plant and the new Elkhorn Diversion.
- Decommission and remove the two existing Natomas Mutual diversions at the Prichard and Elkhorn pumping plants.

The Elkhorn Diversion capacity matches the capacity of the Prichard and Elkhorn pumping plants. Thus, the total existing diversion capacity of 630 cfs would be maintained. Implementation will eliminate unscreened diversions at the subject pumping plants only.

Phase III – Internal Conveyance Upgrades

Phase III of the ABFS Proposed Action consists of re-grading the Riverside Canal and making associated improvements to the internal conveyance system. Under Phase III of the ABFS Proposed Action, the following changes would be implemented:

- Re-grade the Riverside Main Canal from the existing Riverside Pumping Plant outfall to Pumping Plant No. 3 and add one re-lift pump to the existing Pumping Plant No. 3 sump for replacement of the Riverside Pumping Plant supply.
- Improve the internal drainage canal system, including upgrading two control structures, the County Line Check and Lift Pump and the Elkhorn Check and Lift Pumps.
- Decommission and remove the existing Riverside Pumping Plant. The existing capacity of 45 cfs would be served by the Sankey Diversion constructed in Phase I. Implement operating system upgrades at the Sankey Diversion as required to allow for diversion of Riverside system flows at this site.
- Create refugia benches to improve giant garter snake habitat in the new Riverside Main Canal from Pumping Plant No. 3 to the existing Riverside Pumping Plant.

The ABFS Proposed Action would disturb approximately 130 acres, owned by both public and private entities.

Alternative 1 - Sankey Diversion

Alternative 1 (Sankey Diversion) consists of constructing one new diversion with a fish screen on the Sacramento River near Sankey Road, approximately 0.25 mile downstream of the confluence with the NCC (see **Figure 2-4**). Other changes to the distribution system under this alternative include:

- Constructing a new highline canal (Sankey Canal) along the landside of the NCC south levee from the existing Northern Pumping Plant outfall to the new Sankey Diversion, with a connection to the existing Bennett Main Highline Canal at the Bennett Pumping Plant outfall, including a new turnout for the replacement supply to the Bolen Ranch Property;
- Construct the Sankey Drain adjacent to the new Sankey Canal from the North Drainage Canal at Pumping Plant No. 4 to the new Sankey Diversion, including a re-lift pumping plant near the Bennett outfall for recirculation of tailwater into the Northern and Bennett systems. Flows from the existing Vestal Drain would be incorporated into the new Sankey Drain, which will be wider and longer than the existing Vestal Drain;
- Constructing a new highline canal (Garden Highway Canal) from the proposed Sankey Diversion, south along the Garden Highway, to the existing Prichard Pumping Plant;
- Re-grading the Elkhorn Main Highline canal between the existing Prichard Pumping Plant and the Elkhorn Diversion;
- Re-grading the Riverside Main Highline Canal from the existing Riverside Pumping Plant outfall to RD 1000's Pumping Plant No. 3 and addition of one re-lift pump to the existing Plant 3 sump for replacement of the Riverside Pumping Plant supply;
- Improving the internal drainage canal system, including dredging of the North Drainage Canal from the V-Drain to Highway 99 and upgrading of two control structures, the County Line Check and Lift Pump, and the Elkhorn Check and Lift Pumps;
- Enlarging culverts for three road crossings over the North Drainage Canal, between the RD 1000's Pumping Plant No. 2 and the intersection with the East Drainage Canal;
- Decommissioning and removing the existing Verona Diversion Dam and Lift Pumps; and
- Decommissioning and removing the five existing Natomas Mutual diversions at the Northern, Bennett, Prichard, Elkhorn, and Riverside pumping plants, and the small privately-owned pump for the Bolen Ranch property.

Alternative 1 would disturb approximately 145 acres, owned by both public and private entities.

Alternative 2 - Prichard Diversion

Alternative 2 (Prichard Diversion) consists of constructing one new diversion with fish screens adjacent to the existing Prichard Pumping Plant (see **Figure 2-5**). Other changes to the distribution system for this alternative include:

- Constructing a new highline canal (Garden Highway Canal) from the new Prichard Diversion north along Garden Highway, to Sankey Road;
- Constructing a new highline canal (Sankey Canal) along the landside of the NCC south levee from the Garden Highway Canal to the existing Northern Pumping Plant outfall, with a connection to the existing Bennett Main Highline Canal at the Bennett Pumping Plant outfall, including a new turnout for the replacement supply to the Bolen Ranch Property;
- Re-grading the Elkhorn Main Highline canal between the new Prichard Diversion and the existing Elkhorn Pumping Plant outfall;
- Re-grading the Riverside Main Highline Canal from the existing Riverside Pumping Plant outfall to RD 1000's Pumping Plant No. 3, and addition of one re-lift pump to the existing Plant 3 sump for replacement of the Riverside Pumping Plant supply;
- Improving the internal drainage canal system, including dredging of the North Drainage Canal from the V-Drain to Highway 99 and upgrading of two control structures, the County Line Check and Lift Pump, and the Elkhorn Check and Lift Pumps;
- Enlarging culverts for three road crossings over the North Drainage Canal, between the RD 1000's Pumping Plant No. 2 and the intersection with the East Drainage Canal;
- Decommissioning and removing the existing Verona Diversion Dam and Lift Pumps; and
- Decommissioning and removing the five existing Natomas Mutual diversions at the Northern, Bennett, Prichard, Elkhorn, and Riverside pumping plants, and the small privately-owned pump for the Bolen Ranch property.

Alternative 2 would disturb approximately 139 acres, owned by both public and private entities.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Other than site specific concerns, no areas of controversy have thus far been identified for this project. One issue to be resolved has been identified. At the same time that this EIS/EIR is being prepared, SAFCA and the Corps are preparing CEQA and NEPA documents for the

SAFCA Natomas Levee Improvement Program (NLIP). The NLIP includes elements that would make several components of the ABFS Proposed Action unnecessary. For example, the NLIP includes actions to relocate the Elkhorn Main Canal and the Riverside Main Canal eastward to make room for the seepage berms to be constructed under the NLIP. The Elkhorn Main Canal is scheduled to be moved during 2008, while the Riverside Main Canal would be moved during 2009. If SAFCA and the Corps were to undertake the relocation of these two canals, Natomas Mutual could eliminate the re-grading of these two canals from Phase II (Elkhorn) and Phase III (Riverside) of the ABFS Proposed Action.

As of the publication date of this EIS/EIR, SAFCA had completed and adopted an EIR on the NLIP, and the Corps is beginning the preparation of an EIS, scheduled to be completed in May 2008. Because SAFCA and the Corps have not completed all of the environmental work needed to approve the NLIP, Natomas Mutual cannot assume that this work would take place, and must include the re-grading of the two canals in the ABFS Proposed Action. However, during the preparation of the Final EIS/EIR for the ABFS Proposed Action, Natomas Mutual will re-examine the situation, and if appropriate, may revise the project description to remove these two elements of the ABFS Proposed Action and eliminate any environmental impacts associated with them.

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table S-1 below presents a summary of environmental impacts and mitigation for the project alternatives. The level of significance for each environmental impact is indicated both before and after mitigation. For a detailed discussion of ABFS Proposed Action impacts and mitigation measures, see Chapter 3, *Affected Environment and Environmental Consequences* and the *American Basin Fish Screen and Habitat Improvement Project Action Specific Implementation Plan*, included as **Appendix F** of this document.

Table S-2 presents a summary of the cumulative impacts of the ABFS Proposed Action.

The following issue areas were found to have no potential to contribute to cumulative impacts and were not further analyzed in the EIS/EIR:

- Hydrology and water quality,
- Air quality,
- Geology and soils,
- Hazards and hazardous materials,
- Land use, land use planning, and recreation,
- Noise,

- Transportation and circulation,
- Energy and depletable resources,
- Indian Trust Assets, and
- Environmental justice.

For a detailed discussion of the cumulative impacts of the ABFS Proposed Action, please see Chapter 4, *Other Required Analyses*.

Table S-1 Summary Comparison of Impacts of Each Alternative

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| LS=Less than significant impact N=No adverse impact *Numbers in parenthesis represent impact values for each phase of the ABFS Proposed Action | | | | | | | | | | | |
| PS=Potentially Significant impact B=Beneficial impact SU=Significant and unavoidable na=Not applicable | | | | | | | | | | | |
| Terrestrial Biology | | | | | | | | | | | |
| <p>Impact TB-1: Disturbance to nesting and foraging Swainson’s hawks</p> <p>ABFS Proposed Action Removal of mature trees in mature riparian forest habitat at Sankey and Elkhorn diversion sites (Phases I and II). Removal of isolated trees along the landside of the Garden Highway (Phases I and III). Permanent loss of 9.5 acres of potential foraging habitat due to canal construction.</p> <p>Alternative 1 Removal of trees in mature riparian forest habitat at Sankey Diversion site. Permanent loss of 2.11 acres of oak woodland. Permanent loss of 52.2 acres of potential foraging habitat due to canal construction.</p> | <p>Mitigation Measure TB-1: Minimize disturbance to nesting and foraging Swainson’s hawks</p> <p>ABFS Proposed Action Mitigate for permanent loss of foraging habitat at 1:1 ratio. Mitigate for loss of riparian forest and SRA by adopting Mitigation Measure TB-6. Mitigate for the loss of potential nest trees on the land side of the Garden Highway by adopting Mitigation Measure TB-10.</p> <p>Alternative 1 - Sankey Diversion Same as ABFS Proposed Action.</p> | PS | LS | PS | LS | PS | LS | PS | LS | PS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| Alternative 2 Removal of trees in mature riparian forest habitat at Prichard Diversion site. Permanent loss of 2.11 acres of oak woodland. Permanent loss of 52.2 acres of potential foraging habitat due to canal construction. | Alternative 2 – Prichard Diversion Same as ABFS Proposed Action. | | | | | | | | | | |
| Impact TB-2: Disturbance to giant garter snakes ABFS Proposed Action All three phases of the ABFS Proposed Action would create temporary construction-related impacts on giant garter snakes. However, the ABFS Proposed Action (Phase I) would increase potential giant garter snake habitat at the southwestern toe of the NCC over the long term. While the construction of the Sankey Drain at this location would temporarily reduce giant garter snake habitat, the long-term value of this habitat would be enhanced by the addition of the new Sankey Canal adjacent to the Sankey Drain. Alternative 1 Effects of construction activities similar to ABFS Proposed Action. While Alternative 1 ultimately would provide additional connectivity | Mitigation Measure TB-2: Disturbance to giant garter snakes ABFS Proposed Action Natomas Mutual has agreed to join the NBHCP as a signatory and has developed its own set of best management practices (BMPs) to reduce take on Covered Species, including the giant garter snake (see Appendix F). In addition, construction phasing would be scheduled to provide for dewatering, clearing, grading, and earthmoving to occur during the active season (May 1 to October 1), wherever possible. . Construction activities that could not be conducted within this time would be scheduled as close as possible to the active season (spring and fall) with permission from the regulatory agencies. Alternative 1 - Sankey Diversion In addition to the minimization measures listed above for the ABFS Proposed Action, special measures shall be taken to minimize impacts to GGS during re-grading of the North Drainage | PS | LS | PS | LS | PS | LS | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <p>between the Prichard Pumping Plant and associated giant garter snake populations in the northwestern Natomas Basin, they would require dredging a particularly sensitive Reach of the North Drainage Canal.</p> <p>Alternative 2 Similar to the ABFS Proposed Action.</p> | <p>Canal from the V-Drain to Riego Road.</p> <p>Alternative 2 Same as the ABFS Proposed Action.</p> | | | | | | | | | | |
| <p>Impact TB-3: Disturbance to northwestern pond turtle</p> <p>ABFS Proposed Action Potential impacts to pond turtles under all three phases could include the disruption of foraging and courtship behavior, loss or displacement of basking sites and foraging habitat, disruption or loss of nesting sites or activities, and potential death.</p> <p>Alternative 1 Similar to the ABFS Proposed Action.</p> <p>Alternative 2 Similar to the ABFS Proposed Action.</p> | <p>Mitigation Measure TB-3: Reduce disturbances to northwestern pond turtles</p> <p>ABFS Proposed Action Mitigation Measure TB-2 discussed above to protect the giant garter snake would also reduce any potentially significant impacts to pond turtles to less-than-significant levels.</p> <p>Alternative 1 - Sankey Diversion Same as the ABFS Proposed Action.</p> <p>Alternative 2 – Prichard Diversion Same as the ABFS Proposed Action.</p> | PS | LS | PS | LS | PS | LS | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact TB-4: Disturbance to burrowing owls</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact TB-5: Loss of valley elderberry longhorn beetle habitat</i> ABFS Proposed Action Phase II of the ABFS Proposed Action would result in the removal of five elderberry shrubs containing 27 stems that are greater than, or equal to, one inch in diameter at ground level to facilitate the construction of the Elkhorn Diversion. None of the stems contains exit holes. Alternative 1 No impact. Alternative 2 No impact. | Mitigation Measure TB-5: Reduce potential take of VELB and its habitat ABFS Proposed Action Natomas Mutual would implement the following mitigation measures to compensate for VELB habitat that cannot be avoided: <ul style="list-style-type: none"> • Purchase VELB credits in an USFWS-approved mitigation bank to mitigate for 27 elderberry stems in riparian habitat. • Transplant the five elderberry shrubs to an approved mitigation bank, if possible. | N | na | PS | LS | N | na | N | na | N | na |
| <i>Impact TB-6: Loss of riparian and shaded riverine aquatic habitat</i> ABFS Proposed Action Approximately 1.29 (0.22, 1.07, 0) acres of riparian forest and 0.26 (0.13, 0.13, 0) acre of SRA habitat | Mitigation Measure TB-6: Loss of riparian and shaded riverine aquatic habitat ABFS Proposed Action Purchase the appropriate number of credits at an agency-approved mitigation bank. The USFWS, NMFS, and CDFG typically require | PS | LS | PS | LS | N | na | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| would be removed. Alternative 1 Approximately 0.23 acre of riparian forest and 0.15 acre of SRA habitat would be removed. Alternative 2 Approximately 1.75 acres of riparian forest and 0.16 acre of SRA habitat would be removed. | compensation for the loss or disturbance to SRA habitat at a 3:1 ratio (i.e., three trees must be planted for each tree lost). The final number of credits to be purchased shall be determined by agency staff. Alternative 1 - Sankey Diversion Same as the ABFS Proposed Action. Alternative 2 – Prichard Diversion Same as the ABFS Proposed Action. | | | | | | | | | | |
| Impact TB-7: Loss of annual grassland, and ruderal habitats | None required. | LS | na | LS | na | LS | na | LS | na | LS | Na |
| Impact TB-8: Impacts to resident and migratory wildlife ABFS Proposed Action Cliff swallows would lose potential nesting habitat. | Mitigation Measure TB-8: Resident and Migratory Wildlife Species ABFS Proposed Action Swallow nests can be removed during the non-nesting season either by scraping them off artificial structures or by washing them down. The nests must be removed before egg-laying occurs to avoid damaging active nests. Nest removal shall continue from March 1 until September 1, or until construction activity within 100 feet of affected structures is completed, whichever comes first. The Bennett Pumping Plant shall not be dismantled during | PS | LS | PS | LS | PS | LS | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <p>Alternative 1 Same as ABFS Proposed Action.</p> <p>Alternative 2 Same as ABFS Proposed Action.</p> | <p>the nesting season unless all nests have been removed. Deterrent measures to prevent the reestablishment of nests on this structure shall be taken if the facility is not dismantled prior to the swallows' return. Any clearing of potential nesting habitat (e.g., riparian forest) would occur outside of the nesting season, to the extent feasible.</p> <p>Alternative 1 - Sankey Diversion Same as the ABFS Proposed Action.</p> <p>Alternative 2 – Prichard Diversion Same as the ABFS Proposed Action.</p> | | | | | | | | | | |
| <p>Impact TB-9: Loss of wetlands</p> <p>ABFS Proposed Action Permanent loss of waters of the United States below the ordinary high water mark of the Sacramento River, irrigation and drainage ditches, and seasonal wetlands.</p> | <p>Mitigation Measure TB-9: Loss of wetlands</p> <p>ABFS Proposed Action New canals and ditches/drains that would be constructed as part of the ABFS Proposed Action would mitigate for the loss and/or disturbance to existing canals and ditches.</p> <p>The new aquatic habitat that would be created during Phase I has been designed to include features that are beneficial to the giant garter snake, such as a shallow flooded bench and the addition of hibernacula along the banks of the new Sankey Canal, which would offset the temporary disturbances to existing aquatic habitat while construction is underway.</p> <p>With respect to other seasonal wetlands that may</p> | PS | LS | PS | LS | LS | na | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <p>Alternative 1 Same as ABFS Proposed Action.</p> <p>Alternative 2 Same as ABFS Proposed Action.</p> | <p>be impacted during Phases II or III, Natomas Mutual will purchase credits at an approved mitigation bank. However, prior to purchasing credits, Natomas Mutual proposes to use the excess acreage of newly-created canal (aquatic) habitat as mitigation for the degraded seasonal wetlands and only purchase credits if there is not sufficient created canal habitat to assure no net loss. Given the nature of the degraded seasonal wetlands and the enhanced function of the created canals this should be adequate for mitigation purposes.</p> <p>Alternative 1 Same as ABFS Proposed Action.</p> <p>Alternative 2 Same as ABFS Proposed Action.</p> | | | | | | | | | | |
| <p>Impact TB-10: Loss of mature trees</p> <p>ABFS Proposed Action A total of 166 trees greater than 6 inches dbh would be removed (40 under Phase I, 125 under Phase II, and 1 under Phase III). This includes both isolated mature trees on the land side of the Garden Highway and trees greater than 6 inches dbh that are located within the riparian forest and oak woodland.</p> | <p>Mitigation Measure TB-10: Loss of mature trees</p> <p>ABFS Proposed Action Before construction, Natomas Mutual will hire a qualified biologist/arborist, who in conjunction with the project engineer, shall determine the number and size of protected oak trees in Sacramento County that would be impacted by the ABFS Proposed Action. The biologist/arborist shall determine the required mitigation, based on the Sacramento County Oak Tree Preservation Ordinance, in concert with CDFG requirements. The replacement trees shall be planted within the Natomas Mutual service area, within a similar habitat, if possible. Mitigation</p> | PS | LS | PS | LS | N | na | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| Alternative 1 40 native trees greater than 6 inches dbh would be removed. Alternative 2 72 native trees greater than 6 inches dbh would be removed. | for the loss of mature trees may be conducted in conjunction with SAFCA and/or TNBC. Alternative 1 - Sankey Diversion Same as the Proposed Action. Alternative 2 – Prichard Diversion Same as the ABFS Proposed Action. | | | | | | | | | | |
| Aquatic Biology | | | | | | | | | | | |
| <i>Impact AQB-1: Species of primary management concern in the Sacramento River – Impacts from facility construction - access routes, staging areas, and disposal areas.</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact AQB-2: Species of primary management concern in the Sacramento River – Impacts from facility and canal construction – in-stream construction activities.</i> | None required. | LS | na | LS | Na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact AQB-3: Species of primary management concern in the Natomas Cross Canal – Impacts related to facility removal activities</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact AQB-4: Species of primary management concern - Impacts related to impingement and entrainment due to operation of the diversion facilities</i> | None required. | B | na | B | na | B | na | B | na | B | na |
| <i>Impact AQB-5: Species of primary management concern – Impacts related to consolidation and operation of diversion structures</i> | None required. | B | na | B | na | B | na | B | na | B | na |
| <i>Impact AQB-6: Species of primary management concern – Impacts related to changes in predation</i> | None required. | B | na | B | na | B | na | B | na | B | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
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| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact AQB-7: Species of primary management concern in the Sacramento River – Impacts resulting from operations..</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact AQB-8: Species of primary management concern – Impacts resulting from maintenance activities</i> | None required. | B | na | B | na | B | na | B | na | B | na |
| <i>Impact AQB-9: Species of primary management concern- Impacts to fish within the water distribution system</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact AQB-10: Impacts on other fish species in the ABFS Action Area</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Hydrology and Water Quality | | | | | | | | | | | |
| <i>Impact HYD-1: Impacts on compliance with water quality standards or waste discharge requirements</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact HYD-2: Increase in sediment and turbidity in the Sacramento River resulting from construction</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact HYD-3: Changes to sediment and turbidity in the Sacramento River resulting from project operations and maintenance activities</i> | None required. | B | na | B | na | N | na | B | na | B | na |
| <i>Impact HYD-4: Impacts on the water quality of the Sacramento River associated with runoff water</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact HYD-5: Impacts on stormwater drainage system</i> | None required. | N | na | N | na | N | na | N | na | N | na |
| <i>Impact HYD-6: Impacts on groundwater supplies</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact HYD-7: Impacts on flooding</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| Cultural Resources | | | | | | | | | | | |
| <i>Impact CR-1: Impacts to Site CA-SAC-17</i> | None required. | N | na | N | na | LS | na | LS | na | LS | na |
| <i>Impact CR-2: Impacts to Site CA-SAC-485/H</i> ABFS Proposed Action Under Phase II, the re-grading of the Elkhorn Canal has the potential to create adverse impacts on this CRHR-eligible resource. Alternative 1 Same as ABFS Proposed Action. Alternative 2 Same as ABFS Proposed Action. | Mitigation Measure CR-2: Impacts to Site CA-SAC-485/H ABFS Proposed Action Avoid disturbance to significant intact portions of site CA-SAC-485/H and conduct resource documentation and data recovery, if necessary, as determined by Reclamation in consultation with SHPO and other consulting parties. Alternative 1 Same as ABFS Proposed Action. Alternative 2 Same as ABFS Proposed Action. | LS | na | PS | LS | LS | na | PS | na | PS | na |
| <i>Impact CR-3: Impacts to Site CA-SUT-84-H</i> | None required. | LS | na | N | na | N | na | LS | na | LS | na |
| <i>Impact CR-4: Impacts related to the removal of the existing diversion facilities</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| Aesthetics | | | | | | | | | | | |
| <i>Impact AE-1: Changes in the viewshed</i> | None required. | LS | na | LS | na | N | na | LS | na | LS | na |
| <i>Impact AE-2: Degradation of existing visual character</i> | None required. | LS | na | LS | na | N | na | LS | na | LS | na |
| <i>Impact AES-3: New source of substantial light or glare due to construction that would adversely affect day or nighttime views in the area</i> ABFS Proposed Action Construction of the Proposed Action could result in offsite adverse light and glare effects in what is currently a dark environment. Alternative 1 Same as the ABFS Proposed Action. Alternative 2 Same as the ABFS Proposed Action. | <i>Mitigation Measure AES-3: New source of substantial light or glare due to construction that would adversely affect day or nighttime views in the area</i> ABFS Proposed Action Natomas Mutual will ensure that any exterior lighting at facilities and during construction activities shall be located and directed so that it is concealed to the extent practicable when viewed from local roads, nearby communities, and any recreation areas. Alternative 1 – Sankey Diversion Same as the ABFS Proposed Action. Alternative 2 – Prichard Diversion Same as the ABFS Proposed Action. | PS | LS | PS | LS | PS | LS | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <p><i>Impact AES-4: New source of substantial light or glare from security lighting that would adversely affect day or nighttime views in the area</i></p> <p>ABFS Proposed Action Phases I and II of the ABFS Proposed Action could result in offsite adverse light and glare effects due to security lighting in what is currently a dark environment.</p> <p>Alternative 1 Same as the ABFS Proposed Action.</p> <p>Alternative 2 Same as the ABFS Proposed Action.</p> | <p><i>Mitigation Measure AES-4: New source of substantial light or glare from security lighting that would adversely affect day or nighttime views in the area</i></p> <p>ABFS Proposed Action Natomas Mutual will ensure that all lighting constructed and used for the ABFS Proposed Action shall meet the following standards:</p> <ul style="list-style-type: none"> Any exterior lighting at facilities shall be located and directed so that it is concealed to the extent practicable when viewed from local roads, nearby communities, and any recreation areas. Any security lighting provided shall include a wrap-around shroud to prevent fugitive light and glare. In order to minimize light trespass on abutting properties and to reduce potential effects to night-active wildlife in areas retained in open space, illumination measured at the nearest property line of the subject parcels shall not exceed the moon's potential ambient illumination of one-tenth (0.1) of a foot-candle, measured on a vertical plane along the property line. <p>Alternative 1 Same as the ABFS Proposed Action.</p> <p>Alternative 2 Same as the ABFS Proposed Action.</p> | PS | LS | PS | LS | LS | na | PS | LS | PS | LS |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|---------------------------------------------------------------------------------------------|----------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| Agricultural Resources | | | | | | | | | | | |
| Impact AG-1: Environmental impacts related to agricultural land use changes. | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Air Quality | | | | | | | | | | | |
| Impact AQ-1: Construction related air emissions | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Impact AQ-2: Emissions during project operations | None required. | B | na | LS | na | LS | na | B | na | B | na |
| Impact AQ-3: Potential exposure of sensitive receptors to air emissions during construction | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Geology and Soils | | | | | | | | | | | |
| Impact GEO-1: Exposure to liquefaction | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|-------------------------------------------------------------------------------|----------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact GEO-2: Potential impacts from shrinking/swelling of soils</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact GEO-3: Potential for soil erosion</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Hazards and Hazardous Materials | | | | | | | | | | | |
| <i>Impact HAZ-1: Routine use or transport of hazardous materials</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact HAZ-2: Release of hazardous materials</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| <i>Impact HAZ-3: Exposure to wildland fires</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Land Use and Planning | | | | | | | | | | | |
| <i>Impact LU-1: Consistency with adopted land use and zoning designations</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact LU-2: Consistency with adopted land use goals and policies</i> | None required. | N | na | N | na | N | na | N | na | N | na |
| <i>Impact LU-3: Land use compatibility with existing or planned uses</i> ABFS Proposed Action The ABFS Proposed Action could cause a significant impact due to light and glare. Alternative 1 Same as the ABFS Proposed Action. Alternative 2 Same as the ABFS Proposed Action. | <i>Mitigation Measure LU-3: Land use compatibility with existing uses</i> ABFS Proposed Action Implement Mitigation Measures AES-3 and AES-4 in Section 3.5: <i>Aesthetics</i> . Alternative 1 - Sankey Diversion Same as the ABFS Proposed Action. Alternative 2 – Prichard Alternative Same as the ABFS Proposed Action. | PS | LS | PS | LS | PS | LS | PS | LS | PS | LS |
| <i>Impact LU-4: Disrupt or divide the physical arrangement of an established community</i> | None required. | N | na | N | na | N | na | N | na | N | na |
| <i>Impact LU-5: Disrupt or reduce access to recreational resources</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|----------------------------------------------------------------------------------------------------|----------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| Noise | | | | | | | | | | | |
| Impact NO-1: Noise exposure due to facility construction | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Impact NO-2: Noise exposure due to project operations | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Transportation and Circulation | | | | | | | | | | | |
| Impact TR-1: Increase in traffic during the construction period | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Impact TR-2: Potential exceedance of the adopted level of service standard | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Impact TR-3: Potential road hazards and inadequate emergency access due to temporary road closures | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |

| Impact* | Mitigation | Proposed Action Phase I | | Proposed Action Phase II | | Proposed Action Phase III | | Alt 1 – Sankey Diversion | | Alt 2 – Prichard Diversion | |
|---------------------------------------------------------------------------------------------------------------------------------|----------------|-------------------------|----------|--------------------------|----------|---------------------------|----------|--------------------------|----------|----------------------------|----------|
| | | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit | With out Mit | With Mit |
| <i>Impact TR-4: Impacts to traffic safety due to reconstruction of the Garden Highway/Sankey Road intersection</i> | None required. | LS | na | N | na | N | na | LS | na | N | na |
| Energy and Depletable Resources | | | | | | | | | | | |
| <i>Impact ENER-1: Wasteful and inefficient use of energy and depletable resources in operation of the Natomas Mutual system</i> | None required. | LS | na | LS | na | LS | na | LS | na | LS | na |
| Indian Trust Assets | | | | | | | | | | | |
| <i>Impact ITA-1: Effects on ITAs</i> | None required. | N | na | N | na | N | na | N | na | N | na |
| Environmental Justice | | | | | | | | | | | |
| <i>Impact JUS-1: Disproportionate environmental and health effects on minority or low-income populations</i> | None required. | N | na | N | na | N | na | N | na | N | na |

Table S-2 Summary of Cumulative Impacts

| Impact | Mitigation | Proposed Action | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------|-----------------|
| | | Without Mitigation | With Mitigation |
| <i>Impact: Cumulative impact on special-status species and loss of habitats.</i> | None required. | LS | na |
| <i>Impact: Cumulative impact on fisheries or aquatic resources</i> | None required. | LS | na |
| <i>Impact: Cumulative impact on the cultural resources</i> Construction of the ABFS Proposed Action would contribute a small amount to an already cumulative impact on cultural resources in the Natomas Basin. | None required. | LS | na |
| <i>Impact: Cumulative visual quality degradation</i> Construction of the diversion facilities on the Sacramento River would contribute to damaging the regional rural agricultural aesthetic. | None required. | LS | na |
| <i>Impact: Cumulative loss of agricultural resources</i> | None required. | LS | na |

1 INTRODUCTION, PURPOSE, AND NEED

1.1 BACKGROUND

The *American Basin Fish Screen and Habitat Improvement Project* (ABFS Proposed Action) has been developed to address concerns regarding the potential adverse effects to local fish species caused by existing diversion facilities owned and operated by Natomas Central Mutual Water Company (Natomas Mutual), while assuring the reliability of the water supply for beneficial uses within the Natomas Basin. At various times of the year, the lower Sacramento River and Natomas Cross Canal (NCC) are inhabited by numerous fish species at various life stages, including such state and federally-listed species as the winter-run chinook salmon, spring-run chinook salmon, Central Valley steelhead, green sturgeon and other at-risk species. These fish species, particularly anadromous fish (those fish that live as adults in salt water and spawn in fresh water), use the Sacramento River and NCC as part of their migration corridor (upstream for spawning adults and downstream for rearing juveniles). Many of the fish species of concern that use these rivers and streams have declined in population during the last few decades as a result of various stress factors. Entrainment¹ caused by unscreened diversions, straying and stranding, lack of quality stream channel and riparian habitats, blockage of suitable habitat, and excessive predation are believed to be significant factors affecting the decline of many at-risk fish species. Of these, existing unscreened diversions in the Natomas Basin contribute to entrainment by unscreened diversion, straying and stranding, and blockage of suitable habitat.

Under Section 3406(b)(1) of the Central Valley Project Improvement Act (CVPIA), the Secretary of the Department of the Interior is required to “...develop within three years of enactment and implement a program which makes all reasonable efforts to ensure that, by the year 2002, natural production of anadromous fish in Central Valley rivers and streams will be suitable, on a long-term basis, at levels no less than twice the average levels attained during the period of 1967 to 1991...” Section 3406(b)(21) further requires and directs the Secretary to assist the State of California, “...in efforts to develop and implement measures to avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions on the Sacramento and San Joaquin rivers,...” Specifically, this section identifies that, “[Such measures shall include but shall not be limited to construction of screens on unscreened diversions, rehabilitation of existing screens, replacement of existing non-functioning screens, and relocation of diversions to less fishery-sensitive areas...].”

¹ Entrainment entails the drawing of fish into the intakes of water diversion facilities.

The Anadromous Fish Screen Program was established by the Reclamation and USFWS, in part, to provide technical and financial support of efforts to improve fish screening of diversion facilities.

The CALFED Bay-Delta Program's Ecosystem Restoration Program's (ERP) founding principal is the restoration of ecological processes that are associated with stream flow, stream channels, watersheds, and floodplains. These processes create and maintain habitats essential to the life history of the species dependent on the Sacramento-San Joaquin River Delta (Delta). Key restoration actions for Sacramento River fisheries being proposed by the ERP include:

- Reducing fish losses at points of water diversion; and
- Improving anadromous fish passage at existing physical barriers.

Consistent with the objectives of these various restoration programs, the ABFS Proposed Action would benefit fish inhabiting or making use of a reach of the lower Sacramento River adjacent to the Natomas Basin and the NCC, while maintaining the reliability of the water supply for the Natomas Basin.

1.2 PURPOSE OF THIS ENVIRONMENTAL IMPACT STATEMENT / ENVIRONMENTAL IMPACT REPORT

This Environmental Impact Statement/Environmental Impact Report (EIS/EIR) has been prepared to assess and disclose the impacts of the construction and operation of the ABFS Proposed Action as required by the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA).

The project is receiving funding assistance from the CVPIA's Restoration Fund (through the Anadromous Fish Screen Program under Section 3406(b)(21) of the CVPIA). Funds are also being secured from the State of California's Proposition 204 (1996) and the CALFED Bay-Delta Program's ERP.²

The Bureau of Reclamation (Reclamation), which is administering Federal funds for the ABFS Proposed Action, is the lead Federal agency under NEPA. The California Department of Fish and Game (CDFG), which is administering state funds and has permitting authority for facilities affected by the ABFS Proposed Action, is the state lead agency under CEQA. Since this is a

² California's Proposition 204 entails a bond issue of \$995,000,000.00 to provide funds to ensure safe drinking water, increase water supplies, clean up pollution in rivers, streams, lakes, bays, and coastal areas, protect life and property from flooding, and protect fish and wildlife. This Proposition also made changes in the Water Conservation and Water Quality Bond Law of 1986 and the Clean Water and Water Reclamation Bond Law of 1988 to further these goals.

joint NEPA/CEQA environmental review process, this environmental document is being prepared as a joint EIS/EIR.

1.3 STATEMENT OF PURPOSE AND NEED FOR ACTION

The purpose and primary objectives of the ABFS Proposed Action are:

- To avoid or minimize potentially adverse effects to fish, particularly anadromous juvenile fish, due to water diversions by Natomas Mutual and where possible, other small diversions by individual landowners in the Natomas Basin.
- To ensure the reliability of Natomas Mutual's water diversion and distribution facilities for beneficial uses of its water supply within the Natomas Mutual service area.
- To maintain important habitat within the Natomas Basin created by the operation of Natomas Mutual's water distribution facilities.

The need for this action results from the following:

- There are multiple unscreened diversions on the Sacramento River and NCC used by Natomas Mutual and others that result in straying, entrainment, and stranding of migrating fish.
- There is a diversion dam at the mouth of the NCC that acts as a potential migration barrier to fish movement between the Sacramento River and eastside tributaries.

These primary objectives are discussed in more detail below.

The ABFS Proposed Action is needed to avoid and/or minimize potentially adverse effects to at-risk fish species, including listed and proposed species, that inhabit or otherwise use these watercourses during various life stages, and to ensure the reliability of Natomas Mutual's water diversion and distribution facilities for beneficial use of its water supply within the Natomas Mutual service area. Currently, Natomas Mutual diverts water from the Sacramento River and NCC for irrigation uses. Primary uses within the service area are for agriculture, habitat preservation, and winter flooding. Other uses include supply of untreated water to the Sacramento International Airport for landscape irrigation and supply of water for golf course irrigation. The habitat created through the operation of Natomas Mutual irrigation facilities provides important habitat for at-risk species such as the state and federally-listed giant garter snake and the state-listed Swainson's hawk, as well as a variety of other species. Seasonal flooding of rice fields for rice straw decomposition provides needed wetland habitat for various

local and migratory waterfowl. A discussion of Natomas Mutual's water rights is provided in Section 2.2.2: *Water Rights, Uses, and Demands*.

The ABFS Proposed Action would provide an overall benefit to fisheries inhabiting or making use of segments of the lower Sacramento River adjacent to the Natomas Basin and the NCC by improving passage conditions for migratory fish species, preventing entrainment of resident and migratory fish species in unscreened water diversions, and improving aquatic and riparian conditions in the ABFS Action Area by elimination of diversions through consolidation. In and of itself, this project is anticipated to prevent further losses of winter-run, spring-run, fall-run, and late fall-run chinook salmon, Central Valley steelhead, green sturgeon, and other at-risk fish species.

1.4 OBJECTIVES OF THE ABFS PROPOSED ACTION

Specific objectives of the ABFS Proposed Action include:

- Provision of state-of-the-art positive barrier fish screens meeting the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS) and the CDFG fish screening criteria on diversions facilities. These fish screens would minimize the potential for entrainment of resident and migratory fish species.
- Consolidation of diversion facilities, including the consolidation of one small pump operated by a local landowner for diversion of water from the NCC for agricultural irrigation purposes, to minimize fish exposure and minimize potential aquatic habitat impacts.
- Elimination of Natomas Mutual's water diversion facilities on the NCC to improve habitat and minimize the potential for straying and stranding of migrating fish from the Sacramento River.
- Elimination of a diversion dam at the mouth of the NCC, thereby removing a potential migration barrier for fish movement between the Sacramento River and the east side tributaries through the NCC.
- Elimination of diesel lift pumps associated with the diversion dam and the related air quality, noise, and water quality impacts, leading to an improved overall environment for the local species.
- Removal of decommissioned facilities and restoration of aquatic and riparian habitats.
- Maintain the reliability of Natomas Mutual's water diversion and distribution facilities, for beneficial use of its water supply within the Natomas Mutual service area.

1.5 OTHER PERTINENT DOCUMENTS

CENTRAL VALLEY PROJECT IMPROVEMENT ACT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

On October 30, 1992, the President signed into law the Reclamation Projects Authorization and Adjustment Act of 1992 (Public Law 102-575) that included Titled XXXIV, the CVPIA. The CVPIA amends the previous authorities of the California Central Valley Project (CVP) to include fish and wildlife protection, restoration, and mitigation as enhancement to project purposes equal to power generation.

The Department of the Interior developed programs to improve environmental conditions and modify operations, management, and physical facilities, and thus the associated environmental conditions, of the CVP to comply with the purposes and goals of the CVPIA and revised purposes of the CVP. The environmental effects of these programs were analyzed in the October 1999 Final CVPIA Programmatic Environmental Impact Statement (PEIS). The PEIS was not intended to disclose site-specific impacts of implementing the CVPIA. The PEIS was designed to allow subsequent environmental documents to incorporate PEIS analysis by reference and to limit the need to re-evaluate the region-wide and cumulative impacts of CVPIA. Where qualitative but not quantitative data is utilized as the basis of analysis, the PEIS describes what further actions may be taken to improve environmental assessments at the site-specific level, including monitoring and development of an adaptive management program. In many cases, the PEIS analysis included worst-case assumptions, which maximizes the utility of the analysis for tiering by subsequent NEPA analysis.

The 2001 Record of Decision (ROD) for the PEIS included CVPIA Section 3406(b)(21) Avoidance of juvenile anadromous fish loss at diversions including construction of screens, bypasses, fish ladders, and modifications of diversions for implementation. The ROD stated that prior to implementation, each action will be evaluated to determine if additional NEPA analysis is necessary. This EIS/EIR is the site-specific NEPA analysis for the ABFS Proposed Action.

CALFED PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT

The CALFED Bay-Delta Program is a cooperative effort of 25 state and federal agencies with regulatory and management responsibilities in the San Francisco Bay/Sacramento-San Joaquin River Delta (Bay-Delta) to develop and implement a long-term comprehensive plan to restore ecological health and improve water management for beneficial uses of the Bay-Delta system.

The objective of the collaborative planning process is to identify comprehensive solutions to the problems of ecological quality, water delivery reliability, water quality, and Delta levee integrity.

In July 2000, the CALFED agencies released the final Programmatic EIS/EIR, which analyzed a range of alternatives to solve Bay-Delta system problems. In August 2000, the CALFED agencies adopted a preferred alternative that included measures to reduce potential conflict between stakeholders and provide an adequate water supply for all beneficial uses of water.

The Preferred Program Alternative described in the CALFED ROD (CALFED 2000a) is a long-term plan that includes a variety of different potential actions to be implemented over the next 30 years by numerous public and private entities to improve the health of the Bay-Delta estuary. Among the potential ecosystem restoration actions are:

“Modifying or eliminating fish passage barriers, including the removal of some dams, construction of fish ladders, and construction of fish screens that use the best available technology” (Record of Decision Page 19).

Relationship to the CALFED Bay-Delta Programmatic EIS/EIR

This EIS/EIR meets the policy commitments described in the CALFED ROD that each project implementing the CALFED Program would be subject to the appropriate type of environmental analysis. While relying on some of the information from the CALFED PEIS/EIR (CALFED 200b), the analyses in the ABFSHIP EIS/EIR have been conducted independently, and the decisions of the lead agencies (Reclamation and CDFG) have been made independently.

SACRAMENTO AREA FLOOD CONTROL AGENCY (SAFCA)/U.S. ARMY CORPS OF ENGINEERS (CORPS) - NATOMAS LEVEE IMPROVEMENT PROGRAM

At the same time that this EIS/EIR is being prepared, SAFCA and the Corps are preparing CEQA and NEPA documents for SAFCA’s Natomas Levee Improvement Program (NLIP). The NLIP includes elements that would make elements of the ABFS Proposed Action unnecessary. For example, the NLIP includes actions to relocate the Elkhorn Main Canal and the Riverside Main Canal eastward to make room for the seepage berms to be constructed under the NLIP. The Elkhorn Main Canal is scheduled to be moved during 2008, while the Riverside Main Canal would be moved during 2009. If SAFCA and the Corps were to undertake the relocation of these two canals, Natomas Mutual could eliminate the re-grading of these two canals from Phases II (Elkhorn) and III (Riverside) of the ABFS Proposed Action.

As of the publication date of this EIS/EIR, SAFCA had completed and adopted an EIR on the NLIP, and the Corps is beginning the preparation of an EIS, scheduled to be completed in May 2008. Because SAFCA and the Corps have not completed all of the environmental work needed to approve the NLIP, Natomas Mutual cannot assume that this work would take place, and must include the re-grading of the two canals in the ABFS Proposed Action. However, during the preparation of the Final EIS/EIR for the ABFS Proposed Action, Natomas Mutual will re-examine the situation, and if appropriate, may revise the project description to remove these two elements of the ABFS Proposed Action and eliminate any environmental impacts associated with them.

1.6 SCOPE OF THIS DOCUMENT

Pursuant to NEPA and CEQA, this EIS/EIR describes the affected environment, identifies the nature and magnitude of potential environmental effects of the ABFS Proposed Action, analyzes potential alternatives to the ABFS Proposed Action, and presents appropriate mitigation measures intended to reduce the anticipated effects to less-than-significant levels. As stated in the Notice of Preparation (NOP) and Notice of Intent (NOI), or identified during scoping for the ABFS Proposed Action, this EIS/EIR focuses the environmental review on the following areas of potential impact:

- Terrestrial Biology
- Aquatic Biology
- Hydrology and Water Quality
- Cultural Resources
- Aesthetics/Visual Quality
- Agricultural Resources
- Air Quality Geology and Soils
- Hazards and Hazardous Materials
- Land Use, Land Use Planning, and Recreation
- Noise
- Transportation and Circulation
- Energy and Depletable Resources
- Indian Trust Assets
- Environmental Justice
- Cumulative Impacts
- Construction Effects

Chapter 3: *Affected Environment and Environmental Consequences* focuses on those resources as listed above that would be affected by the implementation of the ABFS Proposed Action or its alternatives. It was determined that the activities of the ABFS Action and its alternatives would not affect paleological resources, as they would not involve deep excavation, so no analysis is included in this EIS/EIR.

1.7 REQUIRED PERMITS AND APPROVALS

As lead agencies for the NEPA and CEQA processes, Reclamation and CDFG are responsible for documenting compliance with related federal and state environmental laws and regulations, as well as permit requirements needed to support its decision to approve the ABFS Proposed Action. Chapter 5 of this EIS/EIR documents the coordination between the lead agencies and other federal, state, and local agencies and private entities required to comply with these other applicable laws and regulations.

Table 1-1 provides a listing of agencies and their anticipated permit and authorizing responsibilities.

| Table 1-1 Required Permits, Approvals, and Responsibilities for the ABFS Proposed Action | |
|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agency | Requirement |
| Lead Agencies | |
| Bureau of Reclamation | Lead Agency under NEPA |
| California Department of Fish and Game | Lead Agency under CEQA; Streambed Alteration Agreement (Section 1600); California Endangered Species Act compliance (permitting authority under Section 2081) |
| Federal | |
| U.S. Army Corps of Engineers | Section 404 Clean Water Act and Section 10 Rivers and Harbors Act, Individual Permit |
| U.S. Fish and Wildlife Service | Endangered Species Act Section 7 consultation, ASIP, Fish and Wildlife Coordination Act Report |
| National Marine Fisheries Service | Endangered Species Act Section 7 consultation, ASIP |
| State | |
| Central Valley Regional Water Quality Control Board | Section 401 Clean Water Act water quality certification; Section 402 National Pollution Discharge Elimination System general construction permit |
| California State Reclamation Board | Encroachment Permit for Levee and Floodway Encroachment |
| California State Water Resources Control Board | Permit for Change in the Point of Diversion |
| California State Historical Preservation Office | Section 106, National Historic Preservation Act consultation |
| California State Lands Commission | Permission for land use within the river channel |
| Local | |
| Sacramento County, Department of Public Works, Transportation Division | Encroachment Permit for work within County rights-of-way, Temporary Road Closure Permit and coordination process |
| Sutter County, Department of Public Works, | Design Approval for road relocations, Encroachment Permit for |

| Agency | Requirement |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Transportation Division | work within County rights-of-way, Temporary Road Closure Permit and coordination process |
| Reclamation District No. 1000 | Owner of some affected facilities; participates in operation and maintenance; provides design approval; provides easements for construction |
| Other | |
| Natomas Mutual Water Company | Facility owner; responsible for Operation and Maintenance |

1.8 FEDERAL AND STATE LEGAL AUTHORITIES

FEDERAL REQUIREMENTS

Central Valley Project Improvement Act. The loss of juvenile anadromous fish at water diversions located in the Central Valley has been identified as a contributing factor to the decline of anadromous fish populations. The CVPIA (Section 3406(b)(21)), authorizes the Department of the Interior to “*assist the State of California in efforts to develop and implement measures to avoid losses of juvenile anadromous fish resulting from unscreened or inadequately screened diversions on the Sacramento and San Joaquin Rivers, their tributaries, the Sacramento-San Joaquin Delta, and the Suisun Marsh.*”

The Anadromous Fish Screen Program has been established to fulfill the Department of the Interior’s responsibilities pursuant to the above section of CVPIA. The U.S. Fish and Wildlife Service (USFWS), in coordination with Reclamation, have the lead in acting for the Secretary of the Department of the Interior in implementing the Program. One of the major administrative duties of the Program is serving as the federal lead agency for compliance with the Endangered Species Act, NEPA, and other environmental laws.

National Environmental Policy Act. NEPA (42 USC 4321; 40 CFR 1500.1) applies to all federal agencies, and to most of the activities they manage, regulate, or fund, that affect the environment. It requires that all agencies disclose and consider the environmental implications of their proposed actions. NEPA establishes environmental policies, provides an interdisciplinary framework for preventing environmental damage, and contains “action-forcing” procedures to ensure that federal agency decision-makers take environmental factors into account. NEPA also requires the preparation of an appropriate document to ensure that federal agencies accomplish the law’s purposes. The President’s Council on Environmental Quality (CEQ) has adopted regulations and other guidance, including detailed procedures that federal agencies must follow to implement NEPA. CEQ regulations Section 1506.6 includes provisions for public involvement. Agency pursuit of public involvement may include:

- Providing public notice of NEPA-related hearings, public meetings, and the availability of environmental documents;
- Holding or sponsoring public hearings or public meetings;
- Soliciting appropriate information from the public;
- Explaining in its procedures where interested persons can get information or status reports on EIS and other elements of the NEPA process; and
- Making EIS, the comments received, and any underlying documents available to the public pursuant to the provisions of the Freedom of Information Act (5 U.S.C. 552). Reclamation will use this EIS/EIR to comply with CEQ regulations and document NEPA compliance.

Federal Endangered Species Act. The USFWS and NMFS share responsibility for administering Endangered Species Act (ESA) compliance. NMFS has primary responsibility for implementing ESA with respect to marine fishes and mammals, including migratory or anadromous fish species such as salmon and steelhead. USFWS has primary responsibility for other species.

The purpose of the ESA Section 7(a)(2) consultation requirement is to ensure that any action authorized, funded, or carried out by any federal agency is not likely to jeopardize the continued existence of any covered species or result in the destruction or adverse modification of critical habitat. Typically, a biological assessment is prepared to analyze the effects on listed and proposed species and designated and proposed critical habitat in order to comply with ESA. For CALFED projects, an Action-Specific Implementation Plan (ASIP), which meets the minimum requirements of a biological assessment, is required. The ASIP must conform to CALFED requirements regarding threatened and endangered species and consultation with federal and state agencies. ASIPs are intended to complement the second-tier, project-level environmental review of CALFED actions that is anticipated in the Programmatic EIS/EIR. The ASIP prepared for the ABFS Proposed Action is included as **Appendix F**. Following public review, the ASIP will be submitted to USFWS and NMFS with requests to initiate formal consultation under the ESA.

Magnuson-Stevens Fishery Conservation and Management Act. The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) establishes a management system for national marine and estuarine fishery resources. This legislation requires that all federal agencies consult with NMFS regarding all actions or Proposed Actions permitted, funded, or undertaken that may adversely affect “essential fish habitat.” Essential fish habitat is defined as “waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.” The Magnuson-Stevens Act states that consultation regarding essential fish habitat

should be consolidated, where appropriate, with the interagency consultation, coordination, and environmental review procedures required by other federal statutes, such as NEPA, the Fish and Wildlife Coordination Act (FWCA), the Clean Water Act (CWA), and the ESA. Essential fish habitat consultation requirements can be satisfied through concurrent environmental compliance if the lead agency provides NMFS with timely notification of actions that may adversely affect essential fish habitat and if the notification meets requirements for essential fish habitat assessments. Reclamation and CDFG will use the EIS/EIR and ASIP to comply with Magnuson-Stevens Act regulations.

Fish and Wildlife Coordination Act. The FWCA (16 USC 661 *et seq.*) requires federal agencies to consult with USFWS, or, in some instances, with NMFS and with state fish and wildlife resource agencies before undertaking or approving water projects that control or modify surface water. The consultation is intended to promote the conservation of fish and wildlife resources by preventing their loss or damage and to provide for the development and improvement of fish and wildlife resources in connection with water projects. Federal agencies undertaking water projects are required to fully consider recommendations made by USFWS, NMFS, and state fish and wildlife resource agencies in project reports and to include measures to reduce impacts on fish and wildlife in project plans. A draft Fish and Wildlife Coordination Act Report was prepared by the USFWS in accordance with the FWCA, and is included as **(Appendix E)**.

Farmland Protection Policy Act and Memoranda on Farmland Preservation. Federal agencies are required to assess the potential effects of proposed federal actions on prime and unique farmland under the Farmland Protection Policy Act (FPPA) of 1981 and the Memoranda on Farmland Preservation, dated August 30, 1976, and August 11, 1980, respectively. Federal agencies must examine potential effects before taking any action that could result in converting designated prime or unique farmland for nonagricultural purposes. If there are potentially adverse effects on farmland preservation, the federal agencies may consider alternative actions to lessen those effects. To the extent practicable, federal agencies may create programs that are compatible with state, local, and private programs to protect farmland. A farmland Conversion Impact Rating Form (AD-1006) has been prepared to assess the ABFS Proposed Action impacts on farmland **(Appendix A)**, and the effects of the ABFS Proposed Action on agricultural resources is examined in Section 3.6: *Agricultural Resources*.

National Historic Preservation Act. The National Historic Preservation Act (NHPA) of 1966, as amended, is the principal legislation that guides cultural resource management for federal agencies. Section 106 of NHPA requires that federal agencies take into account the effects of an undertaking on historic properties listed or eligible for listing on the National Register of Historic

Places (NRHP). The Section 106 review process, which is described in 36 CFR 800, requires consultation throughout each phase with the State Historic Preservation Officer (SHPO), Indian tribes, and interested parties. Section 106 consultation for compliance with the NHPA has been completed for the ABFS Proposed Action. A copy of the SHPO's letter concurring with Reclamation's determination that there will be no adverse effects to historic properties is included in **Appendix D**.

Rivers and Harbors Act. Section 10 of the Rivers and Harbors Act of 1899 regulates alteration of (and prohibits unauthorized obstruction of) any navigable waters of the United States. A Section 10 Permit is required for construction of structures in, over, or under; excavation of materials from; or deposition of materials into navigable waters of the United States. The ABFS Proposed Action will require an Individual Department of the Army Permit to authorize work in the Sacramento River, which is designated as a navigable waterway. This permit will be incorporated into the application under the Clean Water Act (CWA), Section 404 individual permit (see below).

Clean Water Act. Section 404 of the CWA establishes a regulatory program that authorizes the United States Army Corps of Engineers (Corps) to issue permits regulating the discharge of dredge and fill material into waters of the United States, including wetlands. Activities that are regulated under this program include fills for development, water resource projects, infrastructure development, and conversion of wetlands to uplands for farming and forestry. The basic principle of the regulatory program is that no discharge of dredged or fill material may be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The ABFS Proposed Action will require an Individual Department of the Army Permit to authorize work within the Sacramento River.

Clean Air Act. The Federal Clean Air Act (CAA) established national ambient air quality standards (NAAQS) in 1970 for six pollutants: carbon monoxide, ozone, particulate matter, nitrogen dioxide, sulfur dioxide, and lead. Areas that do not meet the ambient air quality standards are called non-attainment areas. The CAA requires states to submit a State Implementation Plan (SIP) for non-attainment areas. The United States Environmental Protection Agency (EPA) reviews the SIP and must delineate how the federal standards will be met. The development and evaluation of the ABFS Proposed Action (Chapter 3.7: *Air Quality*) considered the CAA and the SIP.

Executive Order 12898 – Environmental Justice. Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*, requires that federal agencies identify and address any disproportionately high and adverse human health or

environmental effects of federal actions on minority and low-income populations, and assure that federal actions do not result directly or indirectly in discrimination on the basis of race, color, or national origin. As shown in Chapter 3.15: *Environmental Justice*, there are no Environmental Justice communities located in vicinity of project activities.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act of 1918 (MBTA) is the domestic law that implements four international treaties and conventions between the United States and Canada, Japan, Mexico, and Russia, providing protection of migratory birds. This act makes it unlawful for any person to hunt, kill, capture, collect, possess, buy, sell, purchase, import, export, or barter any migratory bird, including the feathers, parts, nests, eggs, or migratory bird products. The MBTA does not protect the habitat of migratory birds. As shown in Section 3.1: *Biological Resources – Terrestrial Biology*, no ABFS Proposed Action actions would directly or indirectly result in collection or sale of migratory birds, bird parts, or bird products; therefore, the ABFS Proposed Action would not violate the MBTA.

STATE REQUIREMENTS

California Environmental Quality Act. CEQA (Public Resource Code 21000 *et seq.*) is regarded as the foundation of environmental law and policy in California. CEQA's primary objectives are to:

- Disclose to decision-makers and the public the significant environmental effects of proposed activities;
- Identify ways to avoid or reduce environmental damage;
- Prevent environmental damage by requiring implementation of feasible alternatives or mitigation measures;
- Disclose to the public the reasons for agency approval of projects with significant environmental effects;
- Foster interagency coordination in the review of projects; and
- Enhance public participation in the planning process.

CEQA applies to all discretionary activities that are proposed or approved by California public agencies, including state, regional, county, and local agencies, unless an exemption applies. CEQA requires that public agencies comply with both procedural and substantive requirements. Procedural requirements include the preparation of the appropriate environmental documents, mitigation measures, alternatives, mitigation monitoring, findings, statements of overriding considerations, public notices, scoping, responses to comments, legal enforcement procedures, citizen access to the courts, notice of preparation, agency consultation, and State Clearinghouse review. CEQA's substantive provisions require that agencies address environmental impacts,

disclosed in an appropriate document. When avoiding or minimizing environmental damage is not feasible, CEQA requires that agencies prepare a written statement of the overriding considerations that resulted in approval of a project that will cause one or more significant effects on the environment. CEQA establishes a series of action-forcing procedures to ensure that agencies accomplish the purposes of the law. In addition, under the direction of CEQA, the California Resources Agency has adopted regulations, known as the State CEQA Guidelines, which provide detailed procedures that agencies must follow to implement the law. This EIS/EIR document is intended to document compliance with all relevant CEQA guidelines and requirements.

California Endangered Species Act. The California Endangered Species Act (CESA) (California Fish and Game Code Sections 2050 to 2097) is similar to the ESA. California's Fish and Game Commission is responsible for maintaining lists of threatened and endangered species under the CESA. CESA prohibits the “take” of listed and candidate (petitioned to be listed) species. “Take” under California law means to “*hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill*” (California Fish and Game Code, Section 86).

CDFG will determine whether the ABFS ASIP complies with the CESA. If the ASIP is in compliance, CDFG may authorize take of covered species, including endangered and threatened species under CESA (Fish and Game Code Sections 2081[b] and 2835).

Natural Community Conservation Planning Act. The NCCPA, California Fish and Game Code (Section 2800 *et seq.*) was enacted to form a basis for broad-based planning to provide for effective protection and conservation of the State's wildlife heritage, while continuing to allow appropriate development and growth. State of California NCCP General Process Guidelines define an NCCP as “*...a plan for the conservation of natural communities that takes an ecosystem approach and encourages cooperation between private and governmental interests.*” The plan identifies and provides for the regional or area-wide protection and perpetuation of plants, animals, and their habitats, while allowing compatible land use and economic activity. An NCCP seeks to anticipate and prevent the controversies caused by species' listings by focusing on the long-term stability of natural communities” (NCCP 2002). The purpose of natural community conservation planning is to sustain and restore those species and their habitat identified by CDFG that are necessary to maintain the continued viability of biological communities impacted by human changes to the landscape. An NCCP identifies and provides for those measures necessary to conserve and manage natural biological diversity within the plan area while allowing compatible use of the land. CDFG may authorize the take of any identified species, including listed and non-listed species, pursuant to Section 2835 of the NCCPA, if the conservation and management of such species is provided for in an NCCP approved by CDFG.

CDFG determined on February 20, 2004, that NCCP triggers for the ABFS Proposed Action do not exist; therefore, CDFG will not seek coverage under NCCPA.

Porter-Cologne Water Quality Control Act of 1970. In 1967, the Porter-Cologne Act established the California State Water Resources Control Board (SWRCB) and nine regional water quality control boards (RWQCB) as the primary State agencies with regulatory authority over California water quality and appropriative surface water rights allocations. The SWRCB administers the Porter-Cologne Act, which provides the authority to establish Water Quality Control Plans (WQCP) that are reviewed and revised periodically; the Porter-Cologne Act also provides the SWRCB with authority to establish statewide plans. The nine RWQCBs carry out SWRCB policies and procedures throughout the State. The SWRCB and the RWQCBs also carry out sections of the Federal CWA administered by EPA, including the National Pollutant Discharge Elimination System (NPDES) permitting process for point source discharges and the CWA Section 303 water quality standards program. WQCPs, also known as basin plans, designate beneficial uses for specific surface water and groundwater resources and establish water quality objectives to protect those uses. These plans can be developed at the SWRCB or the RWQCB level. RWQCBs issue waste discharge requirements for the major point-source waste dischargers, such as municipal wastewater treatment plants and industrial facilities. In acting on water rights applications, the SWRCB may establish terms and conditions in a permit to carry out WQCPs.

1.9 OTHER ACTIVITIES IN THE BASIN NOT PART OF THE ABFS PROPOSED ACTION

1.9.1 ACTIVITIES NOT RELATED TO NATOMAS MUTUAL

In addition to the ABFS Proposed Action, there are a number of other planning activities and development activities ongoing within the ABFS Action Area that are not a part of the ABFS Proposed Action. A subset of these planning activities could ultimately lead to additional water-related features within the ABFS Action Area (for example, the Sacramento River Water Reliability Study could ultimately result in a new water supply diversion from the Sacramento River within the ABFS Action Area for other users). The purpose of this section of the environmental document is to briefly list other planned activities in the basin. These other activities are not a part of the ABFS Proposed Action, The ABFS Proposed Action does not change or increase the capacity of the existing system to convey water or the purpose or places of use of conveyed water. Therefore, these activities are not dependent on the implementation of the ABFS Proposed Action, nor would implementation of the ABFS Proposed Action facilitate these activities. Therefore, these planning and development activities would occur irrespective of implementation of the ABFS Proposed Action. In addition, because Natomas Mutual is not a

land use agency, it has no control over existing and proposed land uses in the ABFS Action Area, such as the development activities listed below. A more detailed description of each of these projects is provided in Section 4.1: *Cumulative Impacts*.

These projects, grouped by the type of activity, are:

Development Projects

- North Natomas Community Plan
- Natomas Joint Vision Plan
- Greenbriar Project
- Sacramento Area Council of Governments (SACOG) Sacramento Region Blueprint
- South Sutter County Specific Plan and Sutter County Measure M
- Natomas Metro Air Park HCP
- Camino Norte/Leona Circle
- City of Sacramento General Plan Update
- County of Sacramento General Plan Update

Infrastructure Projects

- Water Forum Agreement Projects
- Sacramento River Water Reliability Study
- Sacramento Valley Integrated Regional Water Management Plan
- Northwest Interceptor Project
- Sacramento Area Flood Control Agency (SAFCA) Natomas Levee Improvement Program
- DWR/Corps Critical Erosion Site Repairs
- Sacramento International Airport Expansion
- Metro Air Parkway/Interstate 5 Interchange
- CALTRANS I-80 Across The Top Bus/Carpool Lanes Project
- Placer Parkway Corridor Preservation Project
- Improvements To State Route 99 Between I-5 And Elverta Road
- Highway 99/Riego Road Interchange
- Regional Transit Downtown-Natomas-Airport (DNA) Light Rail
- WAPA Sacramento Area Voltage Support
- SMUD Powerline-Elkhorn Substation Capacity Expansion Project
- SMUD Metro Air Park Neighborhood Electric Distribution Project

Other Activities

- Natomas Basin Habitat Conservation Plan
- Changes in Cropping Patterns in the ABFS Action Area

1.9.2 PLANNING FOR FUTURE NATOMAS MUTUAL WATER USES

AGREEMENT WITH AMERICAN STATES UTILITY SERVICES

In order to extend its ability to provide for all water needs under changing conditions, Natomas Mutual has negotiated an agreement with American States Utility Services, Inc. Under this agreement, American States will act as a contractor for Natomas Mutual, increasing Natomas Mutual's ability to serve current and future municipal and industrial customer needs within its service area. American States will oversee the water treatment and distribution services necessary to meet both federal and state safe drinking water standards in the event of a land use change. These planning efforts are needed regardless of the ABFS Proposed Action.

Natomas Mutual does not have land use authority, and neither encourages nor discourages changes in land use. Any future change in land use within the Natomas Basin would require separate NEPA/CEQA compliance. Similarly, future land use decisions would require separate regulatory proceedings to confirm adequate water supplies and facilities to support proposed changes in land use. Finally, any future changes in place of use, purpose of use, season of use, rate of diversion, or point of diversion for existing water rights would require specific action by the SWRCB—the exclusive surface water rights regulatory agency in California. Further discussion of this issue is provided in Section 4.2: *Growth Inducement*.

METROPOLITAN AIRPORT/VICINITY SPECIAL PLANNING AREA

The Metropolitan Airport/Vicinity Special Planning Area, known as Metro Air Park (MAP), is an industrial business park that began construction in April, 2004. Since the NMWC is the historic water purveyor for these lands, NMWC has entered into negotiations with MAP to provide municipal and industrial water to this new business park, in accordance with the approved MAP EIR. Natomas Mutual currently has licenses from the SWRCB allowing it to divert water for Municipal & Industrial (M&I) use within the limits of MAP. Since the supply of surface water to MAP is consistent with the approved MAP plan and the Natomas Mutual water supply is already licensed for such uses, the ABFS Proposed Action would not facilitate any change in municipal services that have not already been analyzed. A Habitat Conservation Plan (HCP) has been developed for MAP and Natomas Mutual has no additional obligations under the MAP HCP.

SACRAMENTO INTERNATIONAL AIRPORT

The Sacramento International Airport (Airport) currently uses groundwater as a domestic water supply. However, the Airport is under an obligation to convert to surface water due to high arsenic levels in the groundwater. Since Natomas Mutual is the historic surface water purveyor for the Airport, Natomas has entered into negotiations with the Airport to provide domestic water. Natomas Mutual currently has licenses from the SWRCB allowing it to divert water for Municipal & Industrial (M&I) use within the limits of the Airport. The conversion from groundwater to surface water sources will need to be independently analyzed by Sacramento County before such a conversion could occur. Since Natomas Mutual's water supply is already licensed for such uses, the ABFS Proposed Action would have no direct effect on the Airport's planning process. Finally, as described in the previous section, land use planning for the Airport is controlled by the Airport's Master Plan.

1.10 DECISION TO BE MADE

The responsible officials for Reclamation and CDFG will decide whether or not to provide funding for construction of the ABFS Proposed Action. The responsible officials for CDFG must decide whether to approve the project as proposed. Possible decision outcomes will be within the range of all the alternatives analyzed in this EIS/EIR.

1.11 REPORT ORGANIZATION

This Draft EIS/EIR is organized into nine chapters, each dealing with a separate aspect of the required content of an EIS/EIR as described in the CEQ's Regulations for implementing NEPA and the Department of Interior NEPA Revised Implementing Procedures and the CEQA Guidelines. To assist the reader in locating information of particular interest, a brief summary of the contents of each section of the EIS/EIR is provided. The following sections are contained within the EIS/EIR:

Executive Summary contains a statement regarding the purpose and need, a description of project alternatives, a discussion of areas of controversy and issue to be resolved, a summary of environmental impacts of the alternatives, proposed mitigation, level of significance after mitigation, and unavoidable impacts.

Chapter 1: Introduction, Purpose, and Need provides an overview of the purpose of the EIS/EIR, statement of purpose and need for action, objectives of the ABFS Proposed Action, the scope of this EIS/EIR, required permits and approvals, the legal authorities for the project, and a list of other activities in the Natomas Basin that are not a part of the ABFS Proposed Action.

Chapter 2: Alternatives Including the ABFS Proposed Action contains the project description and describes a reasonable range of feasible alternatives to be evaluated in the EIS/EIR, including the No Action/No Project Alternative. This section also defines the project location, summarizes components of the ABFS Proposed Action and project phasing, outlines construction activities and sequencing, and describes the measures that have been incorporated into the ABFS Proposed Action to reduce potential impacts on various resource categories.

Chapter 3: Affected Environment and Environmental Consequences describes and evaluates the environmental issue areas, including the existing environmental setting and background (existing conditions), applicable, the regulatory framework for the issue area, environmental thresholds, environmental impacts associated with the project, policy considerations related to the particular environmental issue area under analysis, and feasible mitigation measures to reduce environmental impacts.

Chapter 4: Other Required Analyses provides an analysis of the project's potential growth-inducing and cumulative impacts, the relationship between short-term uses and long-term productivity, irreversible and irretrievable commitment of resources, the environmental effects of the project found not to be significant, and significant and unavoidable impacts.

Chapter 5: Consultation and Coordination describes the scoping that has been completed for the project, including distribution of an NOI and NOP for this EIS/EIR, scoping meetings, comments received during scoping, agencies or individuals consulted during preparation of this EIS/EIR, and the agencies, organizations, and individuals included on the distribution list for receipt of either the EIS/EIR or the Notice of Availability.

Chapter 6: List of Preparers identifies all key individuals responsible for the preparation of this report, including names of the EIS/EIR authors and consultants.

Chapter 7: References/Literature Cited compiles a list of all documents used and persons, organizations, or agencies consulted in the preparation of this EIS/EIR.

Chapter 8: Frequently Used Acronyms and Abbreviations provides a list of all the abbreviations used in this EIS/EIR.

Index provides the location in the document of information for important subjects, by key word.

Appendices set forth data supporting the analysis or contents of this EIS/EIR (such as the NOI, NOP, and technical studies).